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FILE 'HOME' ENTERED AT 08:19:23 ON 15 MAR 2004

FILE 'CAPLUS' ENTERED AT 08:19:30 ON 15 MAR 2004
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FILE COVERS 1907 - 15 Mar 2004 VOL 140 ISS 12
FILE LAST UPDATED: 14 Mar 2004 (20040314/ED)

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FILL ESTIMATED COST

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FILE 'CAPLUS' ENTERED AT 08:19:56 ON 15 MAR 2004
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FILE 'BIOSIS' ENTERED AT 08:19:56 ON 15 MAR 2004
COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC. (R)

=> "adenovirus vector"
L1 5623 "ADENOVIRUS VECTOR"

=> "HIV antigen"
L2 1216 "HIV ANTIGEN"

=> L1 and L2
L3 5 L1 AND L2

=> D L3 TBTB TI SO AU ABS 1-5

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:757477 CAPLUS
DOCUMENT NUMBER: 139:291099
TITLE: Recombinant adenvorioral vectors encoding chimeric HIV-1
antigens for use as vaccine against HIV infection

INVENTOR(S): Emini, Emilio A.; Shiver, John W.; Casimiro, Danilo R.; Bett, Andrew J.; Liang, Xiaoping; Fu, Tong-ming
 PATENT ASSIGNEE(S): Merck & Co., Inc., USA
 SOURCE: PCT Int. Appl., 114 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003077859	A2	20030925	WO 2003-US7727	20030312
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2002-363807P P 20020313
 TI Recombinant adenoviral vectors encoding chimeric HIV-1 antigens for use as vaccine against HIV infection
 SO PCT Int. Appl., 114 pp.
 CODEN: PIXXD2
 IN Emini, Emilio A.; Shiver, John W.; Casimiro, Danilo R.; Bett, Andrew J.; Liang, Xiaoping; Fu, Tong-ming
 AB An efficient means of inducing an immune response against human immunodeficiency virus (HIV) utilizing specific prime-boost regimes is disclosed. The specific prime-boost regimes employ a heterologous prime-boost protocol employing recombinant adenoviral vectors of alternative and distinct serotypes with deleted E1 comprising exogenous genetic material encoding a common **HIV antigen**. Vaccines administered into living vertebrate tissue in accordance with the disclosed regimes, preferably a mammalian host, such as a human or a non-human mammal of com. or domestic veterinary importance, express the HIV-1 antigen (e.g. gag, pol, and nef), inducing a cellular immune response which specifically recognizes HIV-1. It is believed that the disclosed prime/boost regime will offer a prophylactic advantage to previously uninfected individuals and/or provide a therapeutic effect by reducing viral load levels within an infected individual, thus prolonging the asymptomatic phase of HIV-1 infection.

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:710252 CAPLUS
 DOCUMENT NUMBER: 139:228916
 TITLE: Enhanced mucosal immunoglobulin A response of intranasal adenoviral vector human immunodeficiency virus vaccine and localization in the central nervous system
 AUTHOR(S): Lemiale, Franck; Kong, Wing-pui; Akyurek, Levent M.; Xu, Ling; Huang, Yue; Chakrabarti, Bimal K.; Eckhaus, Michael; Nabel, Gary J.
 CORPORATE SOURCE: Vaccine Research Center, National Institutes of Health, NIAID, Bethesda, MD, 20892, USA
 SOURCE: Journal of Virology (2003), 77(18), 10078-10087
 CODEN: JOVIAM; ISSN: 0022-538X
 PUBLISHER: American Society for Microbiology
 DOCUMENT TYPE: Journal
 LANGUAGE: English

TI Enhanced mucosal immunoglobulin A response of intranasal adenoviral vector
 human immunodeficiency virus vaccine and localization in the central
 nervous system
 SO Journal of Virology (2003), 77(18), 10078-10087
 CODEN: JOVIAM; ISSN: 0022-538X
 AU Lemiale, Franck; Kong, Wing-pui; Akyuerek, Levent M.; Xu, Ling; Huang,
 Yue; Chakrabarti, Bimal K.; Eckhaus, Michael; Nabel, Gary J.
 AB Replication-defective adenovirus (ADV) vectors represent a promising
 potential platform for the development of a vaccine for AIDS. Although
 this vector is typically administered i.m., it would be desirable to
 induce mucosal immunity by delivery through alternative routes. In this
 study, the immune response and biodistribution of ADV vectors delivered by
 different routes were evaluated. ADV vectors expressing human
 immunodeficiency virus type 1 (HIV-1) Gag, Pol, and Env were delivered
 i.m. or intranasally into mice. Intranasal immunization induced greater
 HIV-specific IgA responses in mucosal secretions and sera than in animals
 with i.m. injection, which showed stronger systemic cellular and IgG
 responses. Administration of the vaccine through an intranasal route
 failed to overcome prior ADV immunity. Animals exposed to ADV prior to
 vaccination displayed substantially reduced cellular and humoral immune
 responses to **HIV antigens** in both groups, though the
 reduction was greater in animals immunized intranasally. This inhibition was
 partially overcome by priming with a DNA expression vector expressing
 HIV-1 Gag, Pol, and Env before boosting with the viral vector.
 Biodistribution of recombinant adenovirus (rADV) vectors administered
 intranasally revealed infection of the central nervous system,
 specifically in the olfactory bulb, possibly via retrograde transport by
 olfactory neurons in the nasal epithelium, which may limit the utility of
 this route of delivery of ADV vector-based vaccines.

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1995:522763 CAPLUS
 DOCUMENT NUMBER: 122:263522
 TITLE: Adenovirus carrying foreign antigen genes for use in
 vaccines
 INVENTOR(S): Davis, Alan Robert; Hung, Paul Porwen; Lubeck, Michael
 David; Natuk, Robert James; Chanda, Pranab Kumar;
 Murthy, Shridhara Chikkatur Shankaranarayana; Lee,
 Shaw-Guang Lin
 PATENT ASSIGNEE(S): American Home Products Corp., USA
 SOURCE: Eur. Pat. Appl., 25 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 638316	A1	19950215	EP 1994-305656	19940729
EP 638316	B1	20030528		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
AT 241385	E	20030615	AT 1994-305656	19940729
AU 9468891	A1	19950223	AU 1994-68891	19940803
FI 9403626	A	19950212	FI 1994-3626	19940804
ZA 9405843	A	19960205	ZA 1994-5843	19940804
IL 110560	A1	19981030	IL 1994-110560	19940804
CA 2130202	AA	19950212	CA 1994-2130202	19940808
BR 9403202	A	19950411	BR 1994-3202	19940808
JP 07145079	A2	19950606	JP 1994-185752	19940808
HU 69793	A2	19950928	HU 1994-2309	19940808
AU 9748506	A1	19980326	AU 1997-48506	19971219

US 6511845	B1	20030128	US 2000-618360	20000718
PRIORITY APPLN. INFO.:			US 1993-105232	A 19930811
			US 1994-276289	A 19940720
			US 1992-926491	B2 19920807
			IL 1993-106508	A0 19930728
			US 1993-926491	A 19930811
			US 1999-457421	A1 19991207
TI	Adenovirus carrying foreign antigen genes for use in vaccines			
SO	Eur. Pat. Appl., 25 pp.			
CODEN: EPXXDW				
IN	Davis, Alan Robert; Hung, Paul Porwen; Lubeck, Michael David; Natuk, Robert James; Chanda, Pranab Kumar; Murthy, Shridhara Chikkatur Shankaranarayana; Lee, Shaw-Guang Lin			
AB	<p>Adenovirus carrying an antigen gene is described for use in vaccines for the induction of novel antibodies or of cell-mediated immunity. The virion structural protein is not changed but part of early region 3 is deleted from the viral genome and replaced with an antigen gene. A group of viruses carrying genes for proteins of HIV-1 were constructed by standard methods and shown to direct synthesis of the antigens in animal cell culture. A series of treatment regimens using different paths of administration and dosages were used to study the efficacy of vaccine strains in chimpanzee and in dog. The virus survived and propagated in the host animals and induced antigenic responses with most of the response directed against the adenovirus and a fraction of the response directed against the HIV antigen. The use of subunit vaccines as boosters greatly increased the immune response and help to provide protection against HIV challenge to the chimpanzees.</p>			

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1994:407307 CAPLUS
 DOCUMENT NUMBER: 121:7307
 TITLE: Recombinant adenovirus vaccines
 INVENTOR(S): Davis, Alan R.; Hung, Paul P.; Lubeck, Michael D.;
 Natuk, Robert J.; Chanda, Pranab K.; Murthy, Shridhara
 C. S.; Lee, Shaw Guang L.
 PATENT ASSIGNEE(S): American Home Products Corp., USA
 SOURCE: Can. Pat. Appl., 23 pp.
 CODEN: CPXXEB
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2101463	AA	19940208	CA 1993-2101463	19930728
EP 586076	A2	19940309	EP 1993-305833	19930723
EP 586076	A3	19940420		
EP 586076	B1	20030625		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
ZA 9305355	A	19950123	ZA 1993-5355	19930723
AT 243755	E	20030715	AT 1993-305833	19930723
IL 106508	A1	19980222	IL 1993-106508	19930728
BR 9303226	A	19940308	BR 1993-3226	19930730
JP 06165689	A2	19940614	JP 1993-193410	19930804
AU 9344465	A1	19940210	AU 1993-44465	19930806
AU 680826	B2	19970814		
HU 67302	A2	19950328	HU 1993-2285	19930806
HU 214364	B	19980330		
AU 9734227	A1	19971120	AU 1997-34227	19970818
AU 715190	B2	20000120		
US 6511845	B1	20030128	US 2000-618360	20000718
PRIORITY APPLN. INFO.:			US 1992-926491	A 19920807
			US 1993-105232	B2 19930811

US 1994-276289 B2 19940720
US 1999-457421 A1 19991207

TI Recombinant adenovirus vaccines
SO Can. Pat. Appl., 23 pp.
CODEN: CPXXEB
IN Davis, Alan R.; Hung, Paul P.; Lubeck, Michael D.; Natuk, Robert J.; Chanda, Pranab K.; Murthy, Shridhara C. S.; Lee, Shaw Guang L.
AB The invention provides a method of producing antibodies or cell-mediated immunity to an infectious organism in a warm blooded mammal which comprises administering to the mammal intranasally, i.m., or s.c., live recombinant adenoviruses in which the virion structural protein is unchanged from that in the native adenovirus from which the recombinant adenovirus is produced, and which contain the gene coding for the antigen corresponding to said antibodies or inducing said cell mediated immunity. Several type 4, type 5, and type 7 adenoviruses in which the E3 region had been deleted and in which HIV-1 env, or gag-pro, or rev sequences had been inserted, were prepared. Intranasal administration of recombinant adenoviruses to naive chimpanzees resulted in both priming and boosting of both humoral and cell-mediated immune responses directed at HIV recombinant antigens. The inoculated chimpanzees were shown to produce antibodies to the env and gag proteins of HIV. IgG antibodies specific for HIV were observed in nasal, saliva, and vaginal secretions following administration of the recombinant adenoviruses and IgA antibodies specific for HIV were observed in nasal and saliva secretions. Administration of the recombinant viruses by the intranasal route was superior to administration of enteric-coated viruses by the oral route.

L3 ANSWER 5 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1991:319795 BIOSIS
DOCUMENT NUMBER: PREV199192030310; BA92:30310
TITLE: IMMUNE RESPONSE TO HIV-1 GAG ANTIGENS INDUCED BY RECOMBINANT **ADENOVIRUS VECTORS** IN MICE AND RHESUS MACAQUE MONKEYS.
AUTHOR(S): PREVEC L [Reprint author]; CHRISTIE B S; LAURIE K E; BAILEY M M; GRAHAM F L; ROSENTHAL K L
CORPORATE SOURCE: BIOL DEP, MCMASTER UNIV, HAMILTON, ONTARIO, CAN L8N 3Z5
SOURCE: Journal of Acquired Immune Deficiency Syndromes, (1991) Vol. 4, No. 6, pp. 568-576.
CODEN: JAISET. ISSN: 0894-9255.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 15 Jul 1991
Last Updated on STN: 15 Jul 1991

TI IMMUNE RESPONSE TO HIV-1 GAG ANTIGENS INDUCED BY RECOMBINANT **ADENOVIRUS VECTORS** IN MICE AND RHESUS MACAQUE MONKEYS.
SO Journal of Acquired Immune Deficiency Syndromes, (1991) Vol. 4, No. 6, pp. 568-576.
CODEN: JAISET. ISSN: 0894-9255.

AU PREVEC L [Reprint author]; CHRISTIE B S; LAURIE K E; BAILEY M M; GRAHAM F L; ROSENTHAL K L

AB Recombinant **adenovirus vectors** expressing the entire gag (p55) or CA (p24) region of human immunodeficiency virus type 1 (HIV-1) were constructed by inserting the appropriate HIV DNA sequences into the E3 region of human adenovirus type 5 (Ad5) with and without an exogenous SV40 early promoter. The infectious recombinant adenoviruses Adgag1, AdSVgag1, and AdSVCA1 were shown to express the appropriate HIV-1 antigens in human cells in vitro, as measured by immunoprecipitation and p24 antigen capture assays. Using the p24 antigen capture assay, **HIV antigen** expressed by AdSVCA1 was detected earlier in infection and in greater amounts than that produced by either Adgag1 or AdSVgag1. In studies concerning the immunogenicity of these vectors, Balb/c (H-2d) mice given a single intraperitoneal injection of 10⁷ or 10⁸ plaque-forming units of purified vector developed serum antibodies to p24

detected by Western blotting, by 2 weeks postinjection. In the preliminary test of the immunogenicity of the recombinant **adenovirus vectors** in primates, two of four rhesus macaque monkeys generated antibodies to HIV-1 p24 following two injections of AdSVCA1. As expected, monkeys injected with control adenovirus failed to show any anti-HIV response, and none of the monkeys showed any adverse reactions following infection with either recombinant or control adenoviruses. These results suggest that **adenovirus vectors** have considerable potential in the study of possible immune therapies for HIV infection.

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:144658 CAPLUS
DOCUMENT NUMBER: 108:144658
TITLE: Recombinant adenovirus as a vehicle for the HBV surface antigen or **HIV envelope protein** genes
AUTHOR(S): Hung, Paul P.; Morin, John E.; Lubeck, Michael D.; Barton, Joan E.; Molnar-Kimber, Katherine L.; Mason, Bruce B.; Dheer, Surendra K.; Jarocki-Witek, Valentina; Kostek, Beverley; et al.
CORPORATE SOURCE: Microbiol. Div., Wyeth Lab., Inc., Philadelphia, PA, 19101, USA
SOURCE: UCLA Symposia on Molecular and Cellular Biology, New Series (1988), 71(Hum. Retroviruses, Cancer, AIDS), 349-61
CODEN: USMBD6; ISSN: 0735-9543
DOCUMENT TYPE: Journal
LANGUAGE: English
TI Recombinant adenovirus as a vehicle for the HBV surface antigen or **HIV envelope protein** genes
SO UCLA Symposia on Molecular and Cellular Biology, New Series (1988), 71(Hum. Retroviruses, Cancer, AIDS), 349-61
CODEN: USMBD6; ISSN: 0735-9543
AU Hung, Paul P.; Morin, John E.; Lubeck, Michael D.; Barton, Joan E.; Molnar-Kimber, Katherine L.; Mason, Bruce B.; Dheer, Surendra K.; Jarocki-Witek, Valentina; Kostek, Beverley; et al.
AB Recombinant adenovirus type 5 was made to carry the hepatitis B virus surface antigen (HBsAg)-coding sequence in the adenovirus E3 region for the production of HBsAg. This HBsAg was secreted into the medium in tissue culture and has the immunol. and biochem. properties of the 22 nm particles found in human serum. Addnl., the recombinant adenoviruses grew normally in all human cells tested. A hamster model was developed to evaluate the immunogenic properties of these recombinant adenoviruses. Upon intranasal inoculation, both wild-type adenovirus and an adenovirus, in which the E3 region was deleted, replicated in the lungs of these animals and induced an antibody response against adenovirus. Hamsters similarly immunized with the live recombinant adenoviruses produced antibody against both adenovirus and HBsAg. Recombinant adenovirus type 7 carrying the **HIV envelope protein** coding sequence was also constructed. Expression of **HIV envelope protein** was demonstrated by using cytoimmunofluorescence and immunoptn.

L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:568506 CAPLUS
DOCUMENT NUMBER: 109:168506
TITLE: Expression of HBV surface antigen or **HIV**
envelope protein using recombinant
adenovirus vectors
AUTHOR(S): Hung, Paul P.; Morin, John E.; Lubeck, Michael D.;
Barton, Joan E.; Molnar-Kimber, Katherine L.; Mason,
Bruce B.; Dheer, Surendra K.; Jarocki-Witek,
Valentina; Kostek, Beverley; et al.
CORPORATE SOURCE: Microbiol. Div., Wyeth Laboratories, Inc.,
Philadelphia, PA, 19101, USA
SOURCE: Natural Immunity and Cell Growth Regulation (1988),
7(3), 135-43
CODEN: NICRDR; ISSN: 0254-7600
DOCUMENT TYPE: Journal
LANGUAGE: English
TI Expression of HBV surface antigen or **HIV envelope**
protein using recombinant **adenovirus vectors**
SO Natural Immunity and Cell Growth Regulation (1988), 7(3), 135-43
CODEN: NICRDR; ISSN: 0254-7600
AU Hung, Paul P.; Morin, John E.; Lubeck, Michael D.; Barton, Joan E.;
Molnar-Kimber, Katherine L.; Mason, Bruce B.; Dheer, Surendra K.;
Jarocki-Witek, Valentina; Kostek, Beverley; et al.
AB Recombinant adenoviruses were constructed that contained either the
hepatitis virus Bs antigen (HBsAg) coding sequence or the human
immunodeficiency virus (**HIV**) **envelope protein**
coding sequence. The recombinant adenoviruses can replicate normally in
cultured human cells. Cells infected with the adenovirus-HBV recombinant
secreted HBsAg into the tissue culture medium. This HBsAg had immunol.
and phys. properties similar to those of the 22-nm particles found in
human serum. Expression of **HIV envelope**
protein in cells infected with the adenovirus-HIV recombinant was
demonstrated. A hamster model was developed to evaluate the immunogenic
properties of adenovirus-HBV recombinants. Hamsters inoculated
intranasally with live adenovirus-HBV recombinant produced antibody
against both adenovirus and hepatitis B virus surface antigen.

L5 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1988:451754 BIOSIS
DOCUMENT NUMBER: PREV198835092634; BR35:92634
TITLE: EXPRESSION OF HIV ENVELOPE
PROTEIN COMPARED TO EXPRESSION OF HBV SURFACE
ANTIGEN USING RECOMBINANT ADENOVIRUS
VECTORS.
AUTHOR(S): MORIN J E [Reprint author]; BHAT B M; MOLNAR-KIMBER K L;
MASON B B; DHEER S; CHANDA P K; CONLEY A J; DAVIS A R; HUNG
P P
CORPORATE SOURCE: WYETH-AYERST RES, PO BOX NO 8299, PHILADELPHIA, PA 19101,
USA
SOURCE: Journal of Cellular Biochemistry Supplement, (1988) No. 12
PART D, pp. 66.
Meeting Info.: SYMPOSIUM ON THE MOLECULAR BIOLOGY OF RNA
HELD AT THE 17TH ANNUAL UCLA (UNIVERSITY OF CALIFORNIA-LOS
ANGELES) SYMPOSIA ON MOLECULAR AND CELLULAR BIOLOGY,
KEYSTONE, COLORADO, USA, APRIL 4-10, 1988. J CELL BIOCHEM
SUPPL.
ISSN: 0733-1959.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 10 Oct 1988
Last Updated on STN: 10 Oct 1988
TI EXPRESSION OF HIV ENVELOPE PROTEIN COMPARED
TO EXPRESSION OF HBV SURFACE ANTIGEN USING RECOMBINANT ADENOVIRUS
VECTORS.
SO Journal of Cellular Biochemistry Supplement, (1988) No. 12 PART D, pp. 66.
Meeting Info.: SYMPOSIUM ON THE MOLECULAR BIOLOGY OF RNA HELD AT THE 17TH
ANNUAL UCLA (UNIVERSITY OF CALIFORNIA-LOS ANGELES) SYMPOSIA ON MOLECULAR
AND CELLULAR BIOLOGY, KEYSTONE, COLORADO, USA, APRIL 4-10, 1988. J CELL
BIOCHEM SUPPL.
ISSN: 0733-1959.
AU MORIN J E [Reprint author]; BHAT B M; MOLNAR-KIMBER K L; MASON B B; DHEER
S; CHANDA P K; CONLEY A J; DAVIS A R; HUNG P P

L5 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1988:461174 BIOSIS
DOCUMENT NUMBER: PREV198886102893; BA86:102893
TITLE: EXPRESSION OF HBV SURFACE ANTIGEN OR **HIV**
ENVELOPE PROTEIN USING RECOMBINANT
ADENOVIRUS VECTORS.
AUTHOR(S): HUNG P P [Reprint author]; MORIN J E; LUBECK M D; BARTON J
E; MOLNAR-KIMBER K L; MASON B B; DHEER S K; JAROCKI-WITEK
V; KOSTEK B; ET AL
CORPORATE SOURCE: WYETH LAB, INC, MICROBIOLOGY DIV, PO BOX 8299,
PHILADELPHIA, PA 19101, USA
SOURCE: Natural Immunity and Cell Growth Regulation, (1988) Vol. 7,
No. 3, pp. 135-143.
CODEN: NICRDR. ISSN: 0254-7600.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 18 Oct 1988
Last Updated on STN: 18 Oct 1988
TI EXPRESSION OF HBV SURFACE ANTIGEN OR **HIV ENVELOPE**
PROTEIN USING RECOMBINANT **ADENOVIRUS VECTORS.**
SO Natural Immunity and Cell Growth Regulation, (1988) Vol. 7, No. 3, pp.
135-143.
CODEN: NICRDR. ISSN: 0254-7600.
AU HUNG P P [Reprint author]; MORIN J E; LUBECK M D; BARTON J E;
MOLNAR-KIMBER K L; MASON B B; DHEER S K; JAROCKI-WITEK V; KOSTEK B; ET AL
AB Recombinant adenoviruses were constructed that contained either the HBsAg
coding sequence or the **HIV envelope protein**
coding sequence. The recombinant adenoviruses can replicate normally in
cultured human cells. Cells infected with the adenovirus-HBV recombinant
secreted HBsAg into the tissue culture medium. The HBsAg had
immunological and physical properties similar to those of the 22-nm
particles found in human serum. Expression of **HIV**
envelope protein in cells infected with the
adenovirus-HIV recombinant was demonstrated using cytoimmunofluorescent
and immunoprecipitation. A hamster model was developed to evaluate the
immunogenic properties of adenovirus-HBV recombinants. Hamsters
inoculated intranasally with live adenovirus-HBV recombinant produced
antibody against both adenovirus and hepatitis B virus surface antigen.

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:31682 CAPLUS
DOCUMENT NUMBER: 134:114819
TITLE: **Adenovirus vector** containing human immunodeficiency virus (HIV) gene gag, and its use as a vaccine
INVENTOR(S): Chen, Ling; Shiver, John; Bett, Andrew J.; Casimiro, Danilo Riguera; Caulfield, Michael J.; Chastain, Michael A.; Emini, Emilio A.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002607	A1	20010111	WO 2000-US18332	20000703
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1200622	A1	20020502	EP 2000-945133	20000703
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
JP 2003530307	T2	20031014	JP 2001-508378	20000703
US 2002061517	A1	20020523	US 2001-818443	20010327
US 2003228329	A1	20031211	US 2003-461030	20030613
PRIORITY APPLN. INFO.:			US 1999-142631P	P 19990706
			US 1999-148981P	P 19990813
			WO 2000-US18332	W 20000703
			US 2001-818443	A1 20010327

TI **Adenovirus vector** containing human immunodeficiency virus (HIV) gene gag, and its use as a vaccine
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
IN Chen, Ling; Shiver, John; Bett, Andrew J.; Casimiro, Danilo Riguera; Caulfield, Michael J.; Chastain, Michael A.; Emini, Emilio A.
AB The invention provides replication defective adenoviral vectors, derived from adenoviruses 2 and 5, where the E1 or E3 regions are deleted and replaced with a gene expression cassette. The gene expression cassette can comprise: (1) a human immunodeficiency virus 1 (HIV-1) gag gene, which contains codons for optimal expression in a human host, linked to a heterologous promoter (such as CMV promoter), and a transcription terminator; or (2) a humanized HIV-1 gag gene linked to the tPA leader sequence under the control of human CMV promoter and intron A. The invention also provides adenoviral shuttle plasmid vectors containing an adenoviral portion and a plasmid portion. The invention further provides cells transformed with adenoviral vectors, and use of these cells in the recombinant production of adenoviral vectors. Still further, the invention provides for the use of said adenoviral vectors and plasmid vectors containing the **HIV gag** gene but no adenoviral sequences as vaccines, which are able to mount an immune response against HIV-1. Finally, the invention provides the DNA sequence of HIV-1 gag gene, which contains codons for optimal expression in a human host. In the example section, the invention discussed the construction of two adenoviral shuttle plasmids, pA1-CMV1-tpaHIVgag and pA1-CMVI-FLHIVgag, and the recombinant viruses produced from these plasmids in transformed cells. The invention discussed that the viral vaccine can effectively prevent HIV infection when administered to humans either alone or as part of a prime and boost regime also with a vaccine plasmid. The invention also presented Phase I clin. trials results using a recombinant adenovirus 5 gag vector and **HIV gag** DNA plasmid.

produced by using these adenoviral vectors. These results indicate that the adenovirus based expression system is useful for large scale preparation of high-titer lentiviral vectors. Because CD4 positive T-cells and hematopoietic stem cells are important target cells for gene therapy of various disorders, this new method would facilitate the development of such gene therapy strategies.

L7 ANSWER 4 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2001:322096 BIOSIS
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TITLE: A new strategy for large scale preparation of high-titer HIV vectors using adenovirus-based expression vectors.
AUTHOR(S): Miyake, Koichi [Reprint author]; Suzuki, Noriko [Reprint author]; Hirai, Yukihiko [Reprint author]; Shimada, Takashi [Reprint author]
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Division of Gene Therapy Research Center for Advanced Medical Technology, Nippon Medical School, Tokyo, Japan
SOURCE: Blood, (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 430a. print.
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TI A new strategy for large scale preparation of high-titer HIV vectors using adenovirus-based expression vectors.
SO Blood, (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 430a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology. San Francisco, California, USA. December 01-05, 2000. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
AU Miyake, Koichi [Reprint author]; Suzuki, Noriko [Reprint author]; Hirai, Yukihiko [Reprint author]; Shimada, Takashi [Reprint author]
AB HIV based lentiviral vectors were originally designed for gene therapy of AIDS. Recently, it was demonstrated that HIV vectors were capable of gene transfer into non-dividing cells. HIV vectors pseudotyped with VSV-G envelopes were successfully used for stable transduction of neurons, hepatocytes, and hematopoietic progenitor cells. One serious limitation is the difficulty in large scale preparation of HIV vectors, since the stable and reliable packaging cell lines have not been established yet. Currently, HIV vectors are being prepared by time-consuming transfection of 293T cells in large numbers of plates with packaging and vector plasmids. The titer of the HIV vector determined by transduction of CD4 positive HeLa cells is less than 10⁵ cfu/ml. To overcome this problem, we are attempting to develop a new packaging strategy for preparation of a large amount of high titer HIV vectors using adenoviral vectors.
Replication defective **adenovirus vectors** containing the **HIV gag**, **pol**, and **RRE** sequences (**Ad.CAGgpR**) and the **HIV env** gene (**Ad.CAGenv**) driven by the CMV/actin hybrid promoter were constructed. The HIV vector carrying the GFP gene (**GFP/HX4**) were generated in 293T cells by transduction with the adenoviral vectors **Ad.CAGgpR** and **Ad.CAG/env** and transfection with the vector plasmid **pGFP/HX4**. High levels of p24 and gp120 expression were observed by Northern and ELISA assays. The titer of the HIV vector in the culture supernatants was at least 10 folds higher than that prepared by the conventional transfection method. The HIV vectors were purified and concentrated by the combination of CENTRIPREP ultrafiltration, ammonium sulfate precipitation and POROS 50 column chromatography. The final preparation of the HIV vector was free of replication competent cytopathic HIV and adenovirus and was capable of selective and high efficient transduction of CD4 positive cells. We also generated **adenovirus vectors** containing the self-inactivating lentivirus vector carrying the GFP gene (**Ad.CAG/HIVGFP**), the VSV-G gene (**Ad.CAG/VSV**), and the HIV rev gene (**Ad.CAG/rev**). Preliminary experiments showed that high titer lentiviral vectors pseudotyped with either gp120 or VSV-G could be

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PROTEINS WITH RECOMBINANT ADENOVIRUS
VECTORS.
AUTHOR(S): WILHELM J [Reprint author]; KALYAN N; CHANDA P; MURTHY S;
VERNON S; MOLNAR-KIMBER K; MIZUTANI S; DAVIS A; LEE S; HUNG
P
CORPORATE SOURCE: WYETH-AYERST RES, PO BOX 8299, PHILADELPHIA, PA 19101, USA
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TI EXPRESSION AND PROCESSING OF HIV GAG PROTEINS WITH
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SO (1990) pp. ABSTRACT THA 348. SIXTH INTERNATIONAL CONFERENCE ON AIDS. SIXTH
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SAN FRANCISCO, CALIFORNIA, USA. ILLUS. MAPS. PAPER.
AU WILHELM J [Reprint author]; KALYAN N; CHANDA P; MURTHY S; VERNON S;
MOLNAR-KIMBER K; MIZUTANI S; DAVIS A; LEE S; HUNG P